CLAIMS

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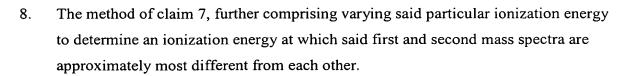
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What is claimed is:

- 5 1. A method for performing liquid chromatography-mass spectrometry on a chemical mixture comprising at least two prostaglandins, said method comprising:
 - a) performing a liquid chromatographic separation of said mixture, thereby generating an eluent;
 - b) using sheath flow, adding a basic liquid to said eluent to generate a diluted eluent; and
 - c) performing mass spectrometry on said diluted eluent.
 - 2. The method of claim 1, wherein said prostaglandins are PGD₂ and PGE₂.
 - 3. The method of claim 1, wherein performing said mass spectrometry comprises ionizing said diluted eluent by electrospray ionization.
 - 4. The method of claim 1, wherein said liquid chromatographic separation is performed under acidic conditions.
 - 5. The method of claim 1, wherein performing said mass spectrometry comprises performing tandem mass spectrometry.
 - 6. The method of claim 5, wherein said tandem mass spectrometry comprises MS⁴.
 - 7. A method for distinguishing between at least two prostaglandin isomers, comprising:
 - a) performing tandem mass spectrometry on each isomer using a particular ionization energy to generate at least first and second mass spectra; and
 - b) varying said particular ionization energy so that said first and second mass spectra are significantly different from each other.

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- 9. The method of claim 7, wherein said prostaglandin isomers are PGD₂ and PGE₂.
- 10. The method of claim 7, wherein said tandem mass spectrometry is MS⁴.